In th Claims:

Please cancel claims 29 and 39 without prejudice.

Please amend the claims as follows:

27. (Twice Amended) A replication defective recombinant adenovirus comprising a [DNA sequence] cDNA encoding brain-derived neurotrophic factor (BDNF), wherein the adenovirus E1 gene is non-functional, and wherein the BDNF [sequence] encoding cDNA is operably linked to a signal controlling expression in [cells] a cell of the central nervous system.

D2

28. (Twice Amended) The replication defective recombinant adenovirus according to Claim 27, wherein the [DNA sequence] cDNA encodes prepro-BDNF.

31. (Twice Amended) The replication defective recombinant adenovirus according to Claim 27, wherein the [DNA sequence] cDNA encodes human prepro-BDNF.

32. (Twice Amended) The replication defective recombinant adenovirus according to Claim 27, wherein the [DNA sequence] cDNA is operably linked to a signal controlling expression in a nerve [cells] cell.

D3

33. (Twice Amended) The replication defective recombinant adenovirus according to Claim 32, wherein the signal is a viral promoter.

34. (Twice Amended) The replication defective recombinant adenovirus according to Claim 33, wherein the signal is selected from the group consisting of an RSV-LTR promoter, an E1A promoter, an MLP promoter, and a CMV promoter.

35. (Twice Amended) A replication defective recombinant adenovirus comprising a cDNA [sequence] encoding human prepro-BDNF, operably linked to [the] an RSV-LTR promoter, wherein the adenovirus E1 gene is non-functional.

37. (Twice Amended) A replication defective recombinant adenovirus comprising a [DNA sequence] cDNA encoding human brain-derived neurotrophic factor (hBDNF) operably linked to a promoter controlling expression in a nerve [cells] cell, wherein the adenovirus E1 gene is non-functional.

D4

38. (Twice Amended) The replication defective recombinant adenovirus according to Claim 37, wherein the promoter is selected from the group consisting of [the] a neuron-specific enolase promoter and [the] a GFAP promoter.

40. (Twice Amended) The replication defective recombinant adenovirus according to Claim [39] 27, comprising ITRs and a sequence permitting encapsulation, wherein the E1 gene and at least one of the E2, E4 or L1-L5 genes are nonfunctional.

D5

41. (Twice Amended) The replication defective recombinant adenovirus according to Claim [39] 27, wherein [said] the replication defective recombinant adenovirus is a type Ad 2 or Ad 5 human adenovirus or a CAV-2 type canine adenovirus.

42. (Twice Amended) A method for the treatment and/or prevention of a neurodegenerative disease comprising administration of an effective amount of the replication defective recombinant adenovirus according to Claim 27.

43. (Twice Amended) The method according to Claim 42, wherein [said] the neurodegenerative disease is selected from the group consisting of Parkinson's disease, Alzheimer's disease, Huntington's disease, and Amyotrophic Lateral Sclerosis (ALS).

44. (Twice Amended) A pharmaceutical composition comprising the replication defective recombinant adenovirus according to Claim 27 and a pharmaceutically acceptable vehicle.

45. (Amended) The pharmaceutical composition according to Claim 44, in injectable form.

46. (Twice Amended) The pharmaceutical composition according to Claim 44, comprising between 10^4 and 10^{14} pfu/ml of replication defective recombinant adenovirus.

D5 Cont

47. (Twice Amended) The pharmaceutical composition according to Claim 46, comprising between 10^6 to 10^{10} pfu/ml of replication defective recombinant adenovirus.

48. (Twice Amended) A mammalian cell infected with the replication defective recombinant adenovirus according to Claim 27.

49. (Twice Amended) The mammalian cell according to Claim 48, wherein [said] the mammalian cell is a human cell.

50. (Twice Amended) The mammalian cell according to Claim 49, wherein the mammalian cell [type] is selected from the group consisting of a fibroblast, a myoblast, a hepatocyte, an endothelial cell, a glial cell, and a keratinocyte.

D6

51. (Amended) An implant comprising [cells] a mammalian cell according to Claim 48 and an extracellular matrix.

D7

52. (Twice Amended) The implant according to Claim 51, wherein the extracellular matrix comprises a gelling compound selected from the group consisting of collagen, gelatin, [glucosaminoglycans] glucosaminoglycan, fibronectin, and [lectins] lectin.

53. (Twice Amended) The implant according to Claim 51, wherein the extracellular matrix comprises a support permitting anchorage of the [cells] mammalian cell.

54. (Twice Amended) The implant according to Claim 53, wherein the support comprises a polytetrafluoroethylene [fibres] fiber.

REMARKS

Claims 29 and 39 have been canceled without prejudice in the instant amendment. Claims 27, 28, 31-35, 37, 38, and 40-54 are pending in this application and have been amended to more particularly point out and distinctly claim that which Applicants regard as their invention and to place the claims in condition for allowance. Support for amended claim 27 is found on page 7, lines 14-24 and on page 9, line 20 to page 10, line 1 of the Specification. Support for amended claim 43 is found on page 12, line 8 of the Specification. Support for amended claim 44 is found on page 12, lines 16-20 of the Specification. No new matter has been added. All of the claims under consideration, as amended, are presented as an Appendix attached hereto.

Summary of the Examiner's Office Action

The Office Action dated February 11, 1999 contains the following rejections:

(1) Objection to the Declaration;
(2) Claims 27-29, 31-34, 37-41, and 48-50 Under Section 112, First Paragraph;
(3) Claims 27-29, 31-35, 37-41, and 48-50 Under Section 103(a) as being allegedly unpatentable over Barde *et al.* in view of Le Gal La Salle *et al.*; and
(4) Claims 27-29, 31-35, 37-41, and 48-50 Under Section 103(a) as being allegedly unpatentable over Barde *et al.* in view of Wilson *et al.*

Each of the issues raised by the Examiner is discussed below. Applicants believe that the foregoing amendment and the following remarks respond completely to the objections and rejections. Applicants further believe the claims are in condition for allowance.